where C_i is the function describing the in-phase baseband signal and C_q is the function describing the quadrature baseband signal.

- Compute $F\left(s_{code}\right)^*$ where F is the Fourier transform operator, and * is the conjugate operator.
- For $\omega = \omega_{in} - \omega_{offset}$ to $\omega_{in} + \omega_{offset}$ step $\frac{\pi}{2T_i}$
  - Create a complex mixing signal $s_{mix}(t) = \cos(\omega t) + j\sin(\omega t),\ t = [0 \ldots T_i]$
  - Combine the incident signal $s(t)$ and the mixing signal $s_{mix}(t)$ $s_{comb}(t) = s(t)s_{mix}(t)$
  - Compute the correlation function $R(\tau) = F^{-1}\left\{F(s_{code})^* F(s_{comb})\right\}$
  - If $\max_\tau |R(\tau)| > R_{\max},\ R_{\max} \leftarrow \max_\tau |R(\tau)|, R_{store}(\tau) = R(\tau)$
- Next ω

B'

Please replace paragraph 0106 with the following paragraph:

[0106] Implementations of the present invention exploit the low duty factor of the DTV reference signal in many ways. For example, one implementation employs a time-gated delay-lock loop (DLL) such as that disclosed in J. J. Spilker, Jr., Digital Communications by Satellite, Prentice-Hall, Englewood Cliffs NJ, 1977, Chapter 18-6. Other implementations employ variations of the DLL, including coherent, noncoherent, and quasi-coherent DLLs, such as those disclosed in J. J. Spilker, Jr., Digital Communications by Satellite, Prentice-Hall, Englewood Cliffs NJ, 1977, Chapter 18 and B. Parkinson and J. Spilker, Jr., Global Positioning System-Theory and Applications, AIAA, Washington, DC, 1996, Vol. 1, Chapter 17, Fundamentals of Signal Tracking Theory by J. Spilker, Jr. Other implementations employ various types of matched filters, such as a recirculating matched filter.

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